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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/096,113	06/11/1998	GERNOT HOYLER	P98.0318	1423

7590 05/26/2009  
SCHIFF HARDIN AND WAITE  
PATENT DEPARTMENT  
6600 SEARS TOWER  
233 SOUTH WACKER DRIVE  
CHICAGO,, IL 60606

EXAMINER
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JONES, HUGH M

ART UNIT	PAPER NUMBER
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2128

MAIL DATE	DELIVERY MODE
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05/26/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/096,113	HOYLER, GERNOT	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hugh Jones	2128	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/5/2008.
2. ☒ The allowed claim(s) is/are 1,4-12,14 and 16-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|---|

### DETAILED ACTION

1. Claims 1-20 are pending. Claims 2-3, 13, 15, 20 have been cancelled. Page 29 was missing from the specification. The deficiency is corrected here with an Examiner's Amendment. Support for the material is provided in the priority document.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given via email communication with Steven Noll on 5/19/2009.

4. The application has been amended as follows; enter as missing page 29, the following text (copied verbatim from Applicant's submitted text):

--Nonsymmetric Linear Systems, SIAM J. Sci. Stat. Comp., Vol. 7, No. 3 pp 856-869, July 1986,. The underlying algorithm of the method is based on a full QR decomposition of the resulting solution space, and is therefore extremely robust. In the present description, the GMRES method will be used as a representative of the CG methods, without the invention being restricted to the use of this method.

In order to make it possible to assess the solution quality during the iteration process, on the basis of equation (53) a residue  $r^{(m)}$ .

$$r^{(m)} = b - Ax^{(m)} \quad (54)$$

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Is introduced as a measure of the error for the iterated function  $x^{(m)}$ . The true error  $e^{(m)}$

$$e^{(m)} = x - x^{(m)} \quad (55)$$

is generally unknown for lack of an exact solution  $X$ . The residue  $R^{(m)}$  measures the error on the right-hand side, that is to say, in the case of the moment method, the accuracy with which the boundary conditions are satisfied after the  $m$ -th iteration step. After substituting equation (55) in equation (54) the following relationship is found, while taking into account equation (53)

$$r^{(m)} = Ae^{(m)} \quad (56)$$

The truncation criterion preferably adopted from the iteration process is when the residue norm  $|r^{(m)}|$  has been reduced

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### ***Allowable Subject Matter***

5. Claims 1, 4-12, 14, 16-19 are allowed.
6. The claims are determined to be statutory.
7. The Process claims were also analyzed under 35 USC 101. It is recognized that, in order to be statutory, a process claim must be 1) tied to a particular machine or apparatus, or 2) it transforms a particular article into a different state or thing. *In re Bilski*, 88 USPQ2d 1385 (2008). It is also recognized that a general purpose computer may be converted into a particular computer through the operation of software on the computer. *In re Alappat*, 31 USPQ2d 1545 (1994). All independent process claims expressly recite, in relevant part, "in a computer, iteratively..." As such, the process is tied to a particular machine, thus meeting the *Bilski* test.
8. The following is an examiner's statement of reasons for allowance:

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The specific algorithms, as incorporated into the independent claims, do not appear to be disclosed in the prior art of record.

9. The 101 rejections are reconsidered and are withdrawn.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hugh Jones whose telephone number is (571) 272-3781. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hugh Jones/

Primary Examiner, Art Unit 2128